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ABSTRACT

A self-instructional slide/tape program entitled "Idiopathic Scoliosis: Guide for Teaching Parents, Children and Health Care Personnel" was created for an audience of nurse-trainees, physicians, and laypeople in British Columbia, Canada. Designed to assist these groups in understanding the nature, history, and treatment of the disease, the program's content and illustrations reflect the response given in preliminary interviews by parents whose children were being treated for scoliosis, and the finished program was evaluated for effectiveness as a teaching/learning tool before it was distributed to children's and adult hospitals, public health clinics, and teaching institutions for health care professionals. Printed media developed to accompany the program were designed for use as an instructional package to enable physicians and public health nurses to establish screening programs across the province. In order to adapt this package for use by nurses and physicians in Jamaica and other West Indian nations, a number of changes would be required. These changes which would be primarily cosmetic and would only affect the program inconsequentially, would be most noticeable in the needs assessment, testing, and distribution phases, and would reflect the difference in the decision-making processes between advanced and developing countries. The changes suggest that instructional development processes for developing countries must reflect factors not usually included in Western models. (LMM)

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MAY 3 - 7, 1982

SYMPOSIUM: HOW WELL DO WESTERN CONCEPTS OF INSTRUCTIONAL DEVELOPMENT (ID) AND TECHNOLOGY TRANSFER TO NON-INDUSTRIALIZED NATIONS.

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MARCH, 1982.

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ABSTRACT

SELF-INSTRUCTIONAL MATERIALS IN JAMAICA:
PROBLEMS OF ADAPTATION

A self-instructional package of learning materials (slides and audio-tape) was created for an audience of nurse-trainees, physicians, and laypeople in British Columbia, Canada. In order to adapt the package for use by nurses and physicians in Jamaica and other West Indian nations, a number of changes were required. The changes suggest that ID processes for developing countries must reflect factors not usually included in Western models.

HOW WELL DO WESTERN CONCEPTS OF INSTRUCTIONAL DEVELOPMENT (ID) AND TECHNOLOGY TRANSFER TO NON-INDUSTRIALIZED NATIONS?

(The Caribbean Scene)

My purpose in this paper is to consider whether, and to what extent, the Instructional Development Process pursued in a project designed for and implemented in British Columbia, Canada would need to be modified for implementation in Jamaica. The premise is that because British Columbia is a province in a Western, industrialized country, while Jamaica belongs to the world of under-development, a number of changes would be th[illegible] necessary to reflect this difference between the two societies.

Now, one is here constrained by time and it will not be possible to develop and defend a position in this paper; but I expect that if the only thing that comes out of this presentation is to raise questions about prevailing opinions and point to the need to rethink certain of the preconceptions in this subject area, then much will have been earned. If, therefore, this presentation can be said to have any position, it is that in transferring technology from North to South, whether and how much adaptation is necessary is a function both of the nature of the technology and of its destination in the developing world. I say <u>whether</u> becuase, as I shall show, this is an instance in which technology designed in and for an industrialized country can be implemented in a country in under-development with the minimum only of modification - and, indeed in such instances, with merely cosmetic and inconsequential modifications. In fact, this presentation may well provide an opportunity to begin dismantling the myth, in which some in the industrialized

world take a measure of comfort, that the differences of both worlds are such that technology from the first cannot, without substantial modification, be utilized in the third (world).

Now the facts, in summary, of the assignment which I undertook in British Columbia, Canada are as follows:

> At the request of an Orthopaedic Surgeon in Vancouver who, being very committed to patient education, assumed the responsibility for providing it. The program titled idiopathic Scoliosis: Guide for Teaching Parents, Children and Health Care Personnel was developed.

The aim of the program was to assist parents, children and health care personnel to understand Scoliosis, its nature, history and treatment.

The program is approximately 2 hours long; set to music and is divided into the following 3 parts. Each part is self-contained.

Part I deals with Definition, Diagnosis and Treatment Philosophy

Part II Surgical Treatment, and

Part III Home Care

Before the actual production of the program a sample of twenty-five (25) parents whose children has scoliosis and were treated for it were inter-viewed via telephone to discover their feelings and experience with this condition. They responded enthusiastically and their responses influenced the content and illustrations in the program. Because the medical, nursing and other health professions were interested in this subject, it was also decided to include them as possible audiences.

The finished program was evaluated for effectiveness as a teaching/learning tool. The evaluation covered such areas as relevance of content; impact on parents and their children who have scoliosis in terms of their coping with the condition after viewing the program, length of presentation, etc.

Printed media were developed to accompany this program and used as an instructional package for physicians and public health nurses in the province of British Columbia to enable them to establish screening programs for scoliosis across the province.

The slide/tape program was distributed to children's and adult hospital, to public health clinics, as well as to teaching institutions for health care professionals.

The instructional development process used in carrying out the assignment had these steps:

1. Collect information on subject
2. Write preliminary script
3. Identify resources - funding, people to do illustrations, photography, etc.
4. Story board script with artist
5. Produce the programs - (i.e. drawings, photography, tapes, etc.)
6. Field testing (proof viewing and related retaping)
7. Distribution
8. Evaluation

Analysis of data collected during the evaluation phase showed that the project had met its objectives.

If this same project had been developed for implementation in Jamaica I would need to make some changes. But such similar changes would need to be made even if the British Columbia originated program were to be implemented in Toronto, say. For instance, differences in philosophy of treatment and care would need to be accounted for, as well as the different treatment modalities based on a philosophy of care and available resources.

It will be noted, however, that in both instances (i.e. Toronto and Jamaica), the changes would be merely cosmetic, and would hardly affect the program in any but the most inconsequential way. One should mention that such cosmetic and superficial modifications would be necessary even if a south - south posture was envisaged - i.e. if the program were designed for one developing country but was implemented in another. In other words, if the program had been designed for Jamaica, but was subsequently to be implemented in Trinidad and Tobago - countries at almost the same stage of development - certain such cosmetic changes would be necessary.

The changes that would be significant in a British Columbia to - Jamaica transfer of the program would be most noticable in the needs assessment phase -- the process by which such a program is designed -- and in the phases of testing and distribution -- actual implementation. And the bulk of these changes would reflect the difference in the decision-making processes in advanced as against developing countries. The difference, therefore, between the ID Processes in British Columbia and Jamaica would be based on the difference in their respective systems of decision-making, with the Jamaican system being more similar to the less mature systems of developing countries as a whole.

Now, it is typical of developing countries that their bureacracies are slower than those of Western industrialized countries; and their authority structures are such that decision-making is pushed progressively upwards. In fact, there are developing countries where the go/no-go decision on a program such as this would be made by the Cabinet of Ministers of the Central Government; and while this type of decision-making may well be symptomatic of developing countries, it may be explained by their having to manage centrally their scarce resources. In any case, and given this background, the ID Process in the Jamaica experience would be as follows:

> The Surgeon with whom the idea for the exercise would have originated would soon have to defer to someone else to get his idea moving; and
>
> that someone else would defer again to another someone in the medical-bureaucratic chain until the pinacle was reached.

Typically, therefore, the go/no-go decision on the project will be made, in a developing situation, by someone other than the Surgeon. It is that non-medical and strictly bureaucratic source who would determine both the availability of resources and the priority of the Surgeon's proposal within the overall scheme of things.

It would seem, therefore, that in the developing country situation (and certainly in Jamaica) the surgeon with whom the idea of the project originated would need to defer to someone else and that someone else would, in turn, defer to another in a chain until the pinacle was reached. And even after the go decision was made in principle, there would be another

important question mark in the ID Process: namely the human resource factor to undertake such an assignment. In less developed nations, this problem would be somewhat ironic since human resources in a quantitative sense make up one factor with which such countries are over supplied; and indeed it would not be merely a question of availability of trained personnel. Rather, it would be how such persons might be relieved from their current substantive duties to undertake the assignment. This factor of opportunity-costs would be quite a consideration in the Jamaica situation: if one person is to be relieved for other duties, how will that person's substantive duties be undertaken?

There would be other financial considerations in the Jamaica situation as well; the need for production funding and technical assistance would lead almost certainly to an application for aid from an international or bilateral source - Pan American Health Organization/World Health Organization, United Nations Development Program, etc. This, however, would open-up the process to other concerns since with such international or bilateral assistance would, come typically expert help. Whereas, without such assistance a Jamaican could comfortably undertake the assignment, the situation would then become such that the Jamaican would be working with the provided expert as counterpart on the assignment. This situation would be the direct result of financial, budgetary and bureaucratic constraints, and not a reflection of the country's intrinsic inability to undertake the task.

We have said all this without deliberating over factor proportions in developing countries or of other considerations which, conventionally, provide the basis for the demonstration of how inappropriate industrialized technology

is to developing countries; and we hope that it has shown (in a very limited way, admittedly) that some industrialized country technologies can be appropriate to developing countries. The lesson, if one is to be learned, is that there is a thin line in this instance between the necessary cosmetic changes on the one hand and, on the other, those changes that are necessary to reflect the differences in the way that decision-making takes place in the various societies.

We cannot be said to have proved that the changes necessary would not merely be a function of differences in culture but rather a factor of underdevelopment itself. That was not our objective: what we believe we have shown is that the changes which may be necessary when technologies are crossing national borders do not necessarily justify a complex on either side of those borders.